



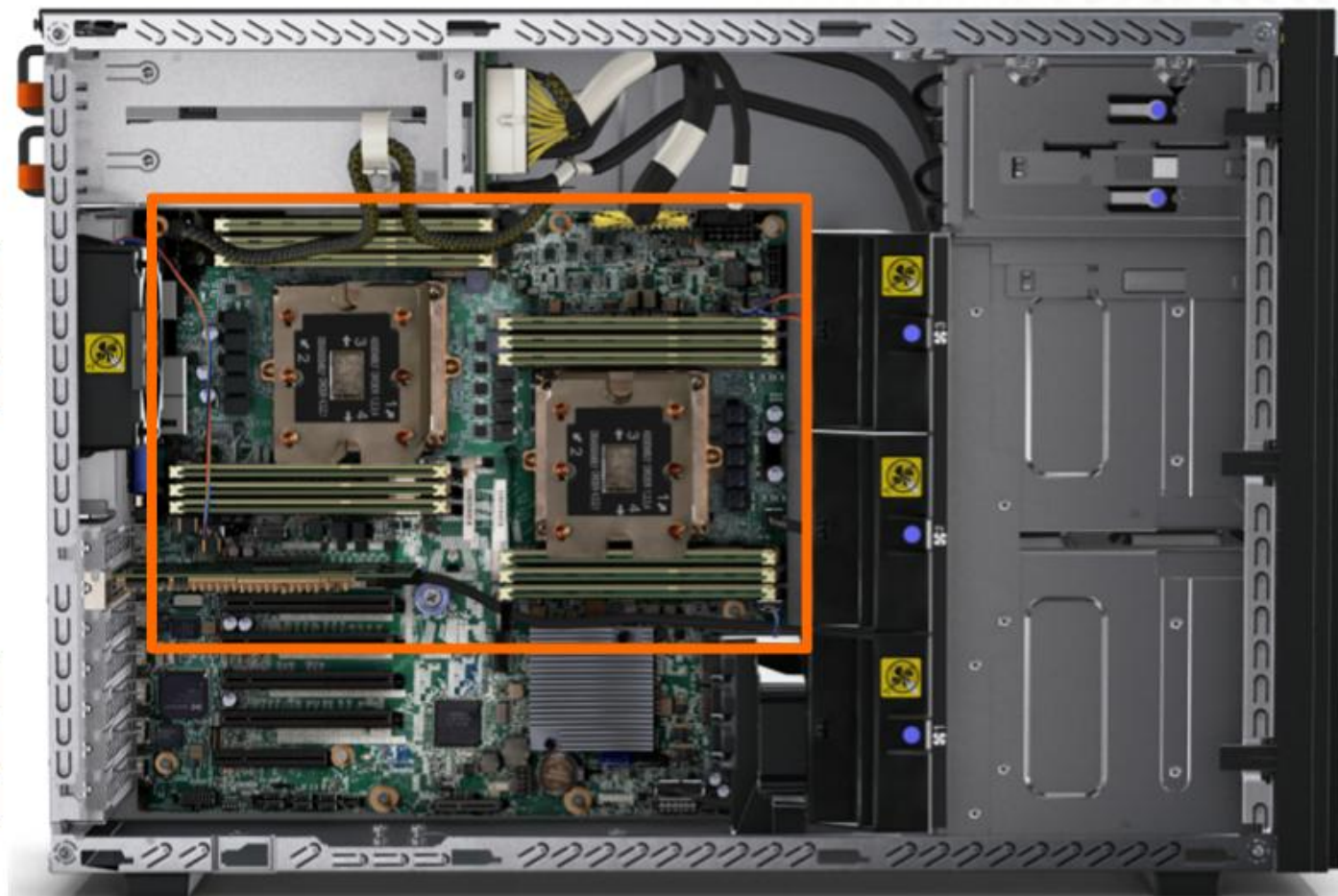
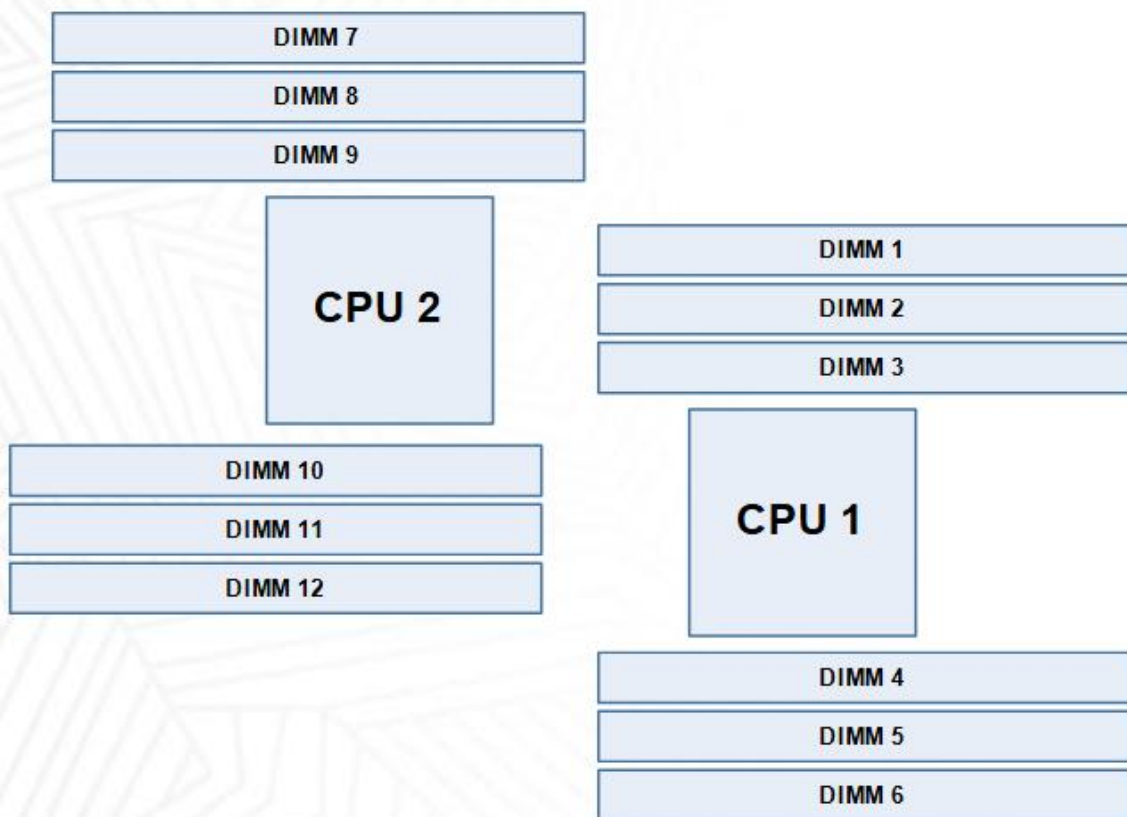
➞ System configurations and diagrams

Memory and storage configurations



Memory configurations

ST550 supports RDIMM and LRDIMM. There are 12 DIMM slots, six channels per CPU, one DIMM per channel. The memory speed is up to 2666 MHz.



ST550 chassis matrix

The table shows ST550 supported configurations. Please check the next slide for more details.

Chassis	Supported configurations	Hot-swap support	Simple-swap support	SATA	SAS	NVMe support
3.5-inch chassis	Four 3.5-inch SATA simple-swap (6 G only)		x	x		
	Eight 3.5-inch SATA simple-swap (6 G only)		x	x		
	Four 3.5-inch SATA/SAS hot-swap	x		x	x	
	Eight 3.5-inch SATA/SASA hot-swap	x		x	x	
	Hybrid eight 3.5-inch and four 2.5-inch hot-swap	x		x	x	
2.5-inch chassis	Eight 2.5-inch SATA/SAS hot-swap	x		x	x	
	Eight 2.5-inch SATA/SAS/NVMe hot-swap	x		x	x	x
	16x 2.5-inch SATA/SAS hot-swap	x		x	x	
	16x 2.5-inch SATA/SAS/NVMe hot-swap	x		x	x	x
	20x 2.5-inch SATA/SAS hot-swap	x		x	x	
	20x 2.5-inch SATA/SAS/NVMe hot-swap	x		x	x	x

Chassis configurations

Click different configurations to view the details.

Important information

3.5-inch configuration matrix

Four and eight 3.5-inch simple-swap

Four and eight 3.5-inch hot-swap

2.5-inch configuration matrix

Eight 2.5-inch hot-swap

Sixteen 2.5-inch hot-swap

Twenty 2.5-inch hot-swap

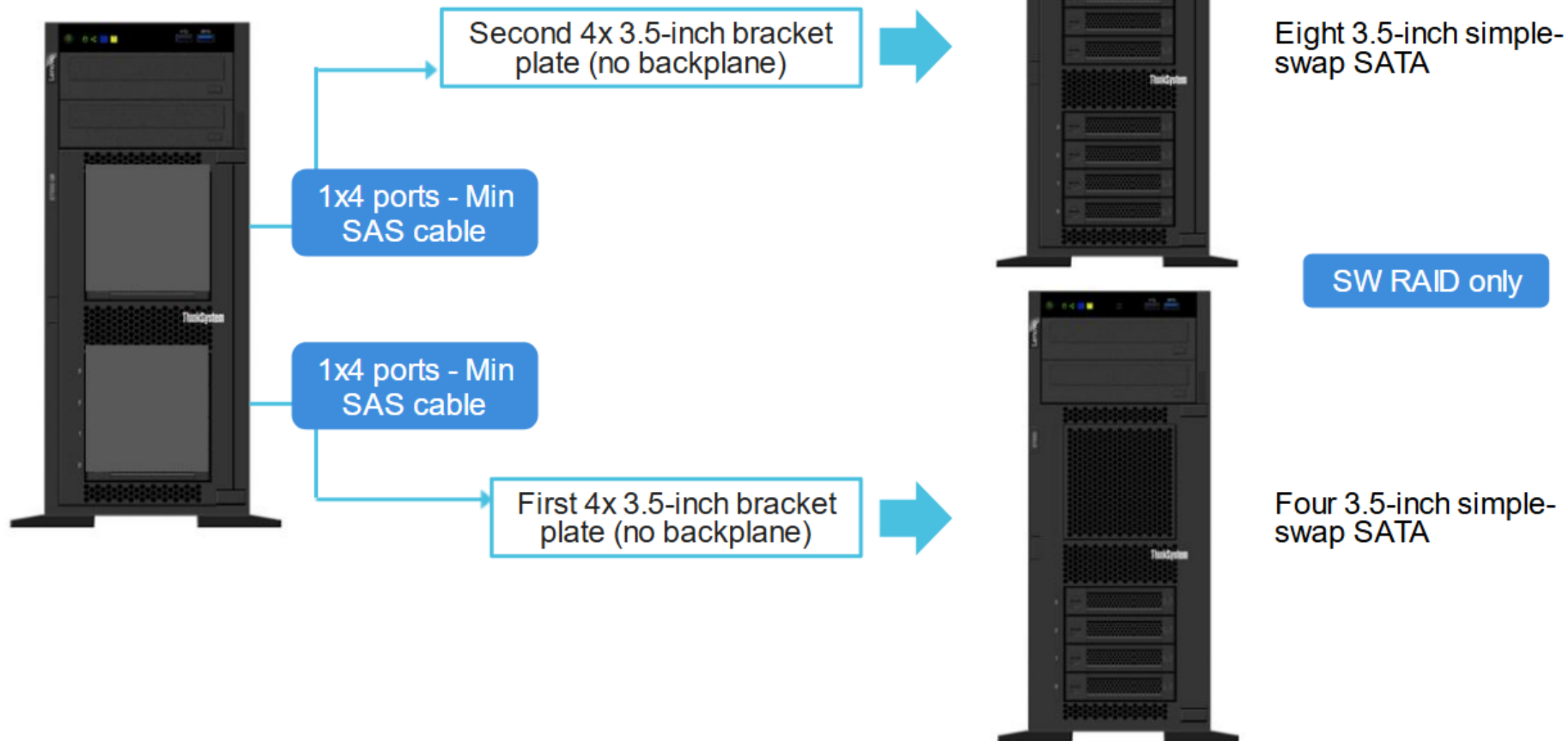
Hybrid configuration matrix

Hybrid eight 3.5-inch and four 2.5-inch hot-swap

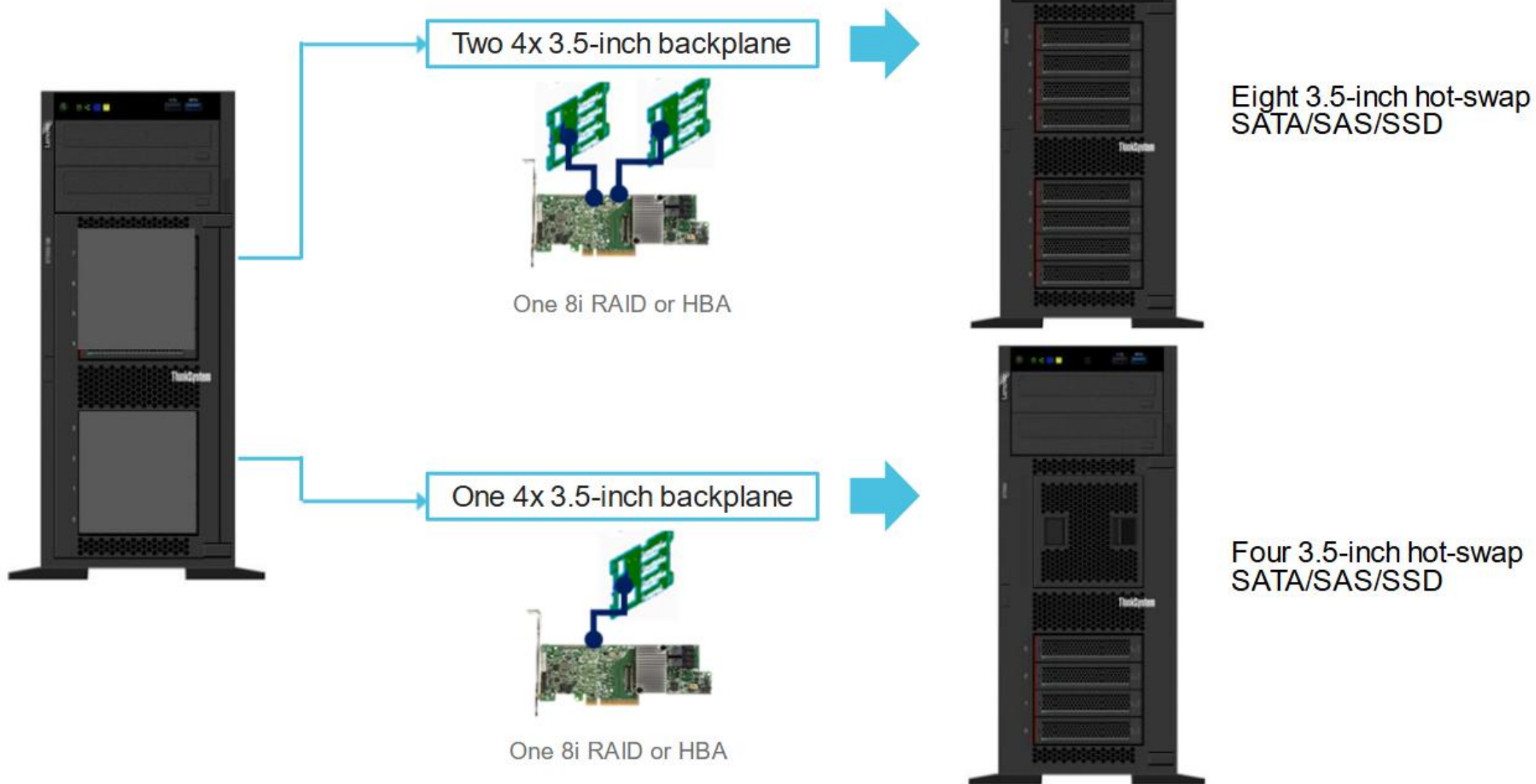
HDD configuration	HDD Type							PCIe NVMe Switch	SATA/SAS RAID solution								ODD	SATA M.2
	3.5-inch		2.5-inch								Entry RAID Cacheless	Full Feature Cached RAID			JBOD HBA			
	SATA	SAS	NVMe	SATA SSD	SAS SSD	SAS HDD	SATA HDD		Non RAID	SW SATA RAID	8i Entry	8i Adv	16i Adv	24i Adv	8i JBOD HBA	16i JBOD HBA		
										Intel RSTe	530-8i	730-8i 930-8i	930-16i	930-24i	430-8i	430-16i		
Four 3.5-inch simple-swap SATA (6G only)	x								x	x							0,1,2	x
Eight 3.5-inch simple-swap SATA (6G only)	x								x	x							0,1,2	x
Four 3.5-inch hot-swap SAS/SATA	x	x		X							x						0,1,2	x
	x	x		x								x					0,1,2	x
	x	x		x											x		0,1,2	x
Eight 3.5-inch hot-swap SAS/SATA	x	x		x							x						0,1,2	x
	x	x		x								x					0,1,2	x
	x	x		x											x		0,1,2	x

Four and eight 3.5-inch simple-swap

X



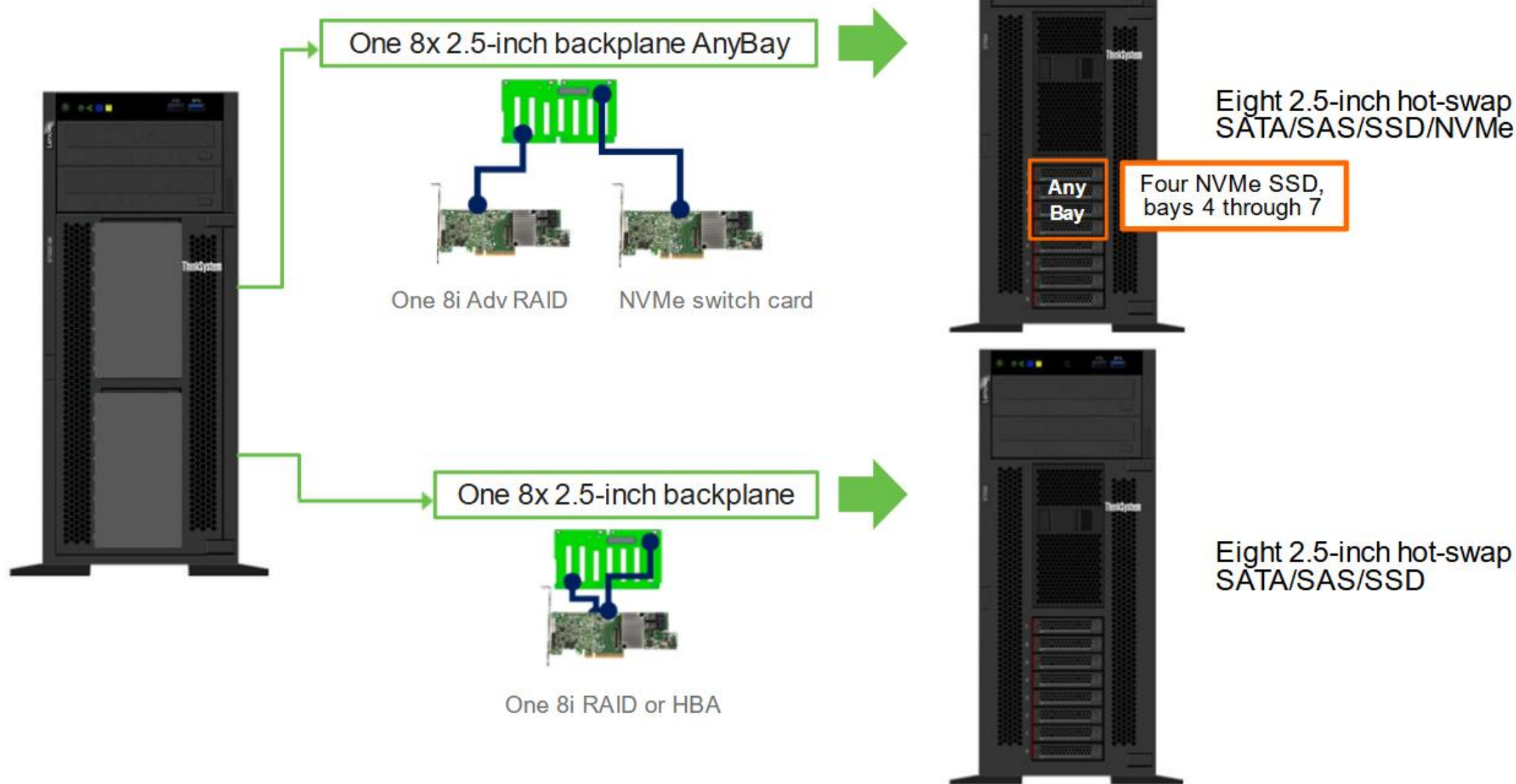
Four and eight 3.5-inch hot-swap



HDD configuration	HDD Type							PCIe NVMe Switch	SATA/SAS RAID solution								ODD	SATA M.2
	3.5-inch		2.5-inch								Entry RAID Cacheless	Full Feature Cached RAID			JBOD HBA			
	SATA	SAS	NVMe	SATA SSD	SAS SSD	SAS HDD	SATA HDD		Non RAID	SW SATA RAID	8i Entry	8i Adv	16i Adv	24i Adv	8i JBOD HBA	16i JBOD HBA		
Eight 2.5-inch hot-swap SAS/SATA				X	X	X	X				X						0,1,2	x
				X	X	X	X					X					0,1,2	x
				X	X	X	X								X		0,1,2	x
Eight 2.5-inch hot-swap NVMe/SAS/SATA			X	X	X	X	X	X				X					0,1,2	x
16x 2.5-inch hot-swap SAS/SATA				X	X	X	X						X				0,1,2	x
				X	X	X	X									X	0,1,2	x
				X	X	X	X				(2)						0,1,2	x
				X	X	X	X					(2)					0,1,2	x
				X	X	X	X								(2)		0,1,2	x
				X	X	X	X					X			X		0,1,2	x
16x 2.5-inch hot swap NVMe/SAS/SATA			X	X	X	X	X	X					X				0,1,2	x
20x 2.5-inch hot-swap SAS/SATA				X	X	X	X							X			No	x
20x 2.5-inch hot-swap NVMe/SAS/SATA			X	X	X	X	X	X						X			No	x

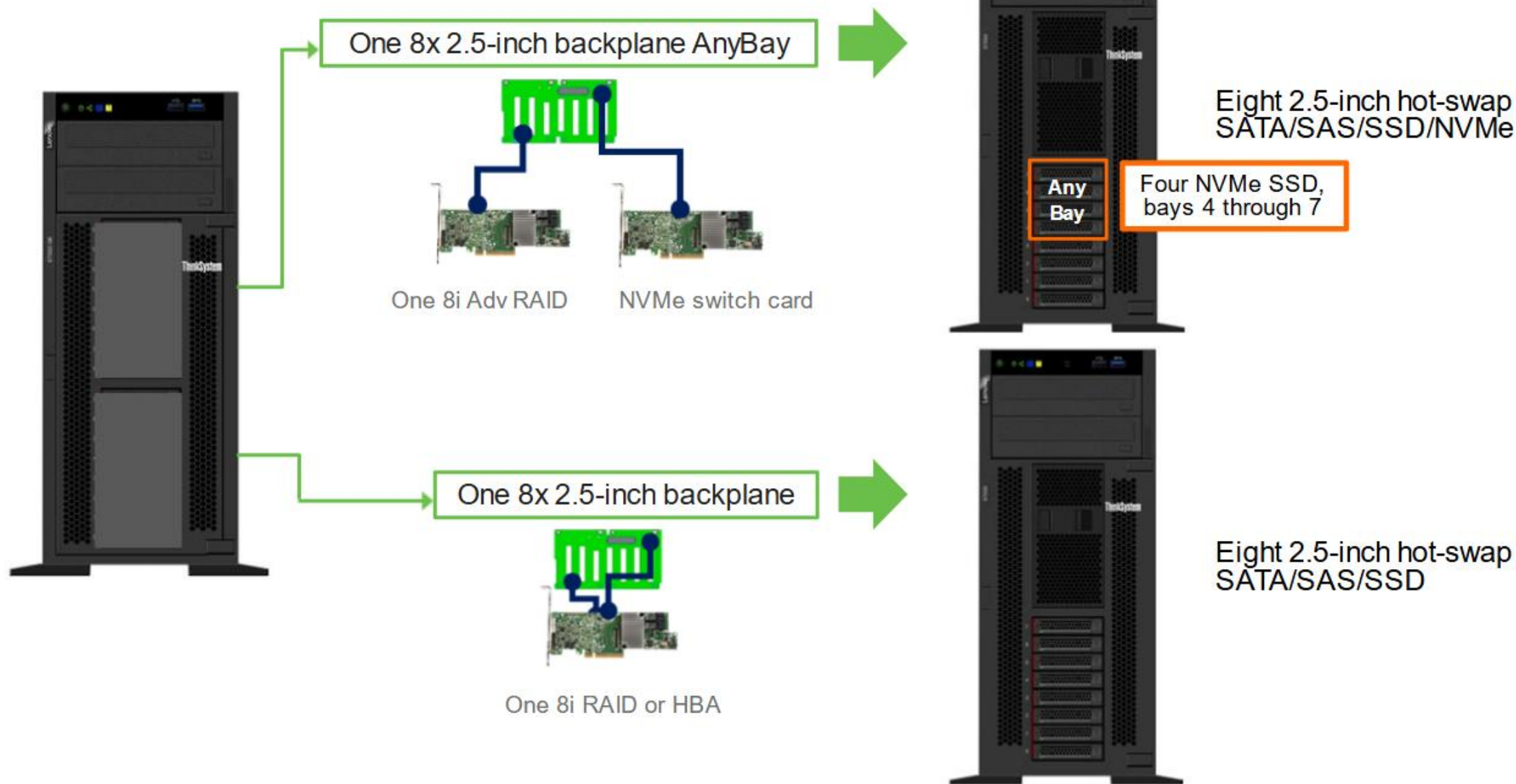
Eight 2.5-inch hot-swap

X



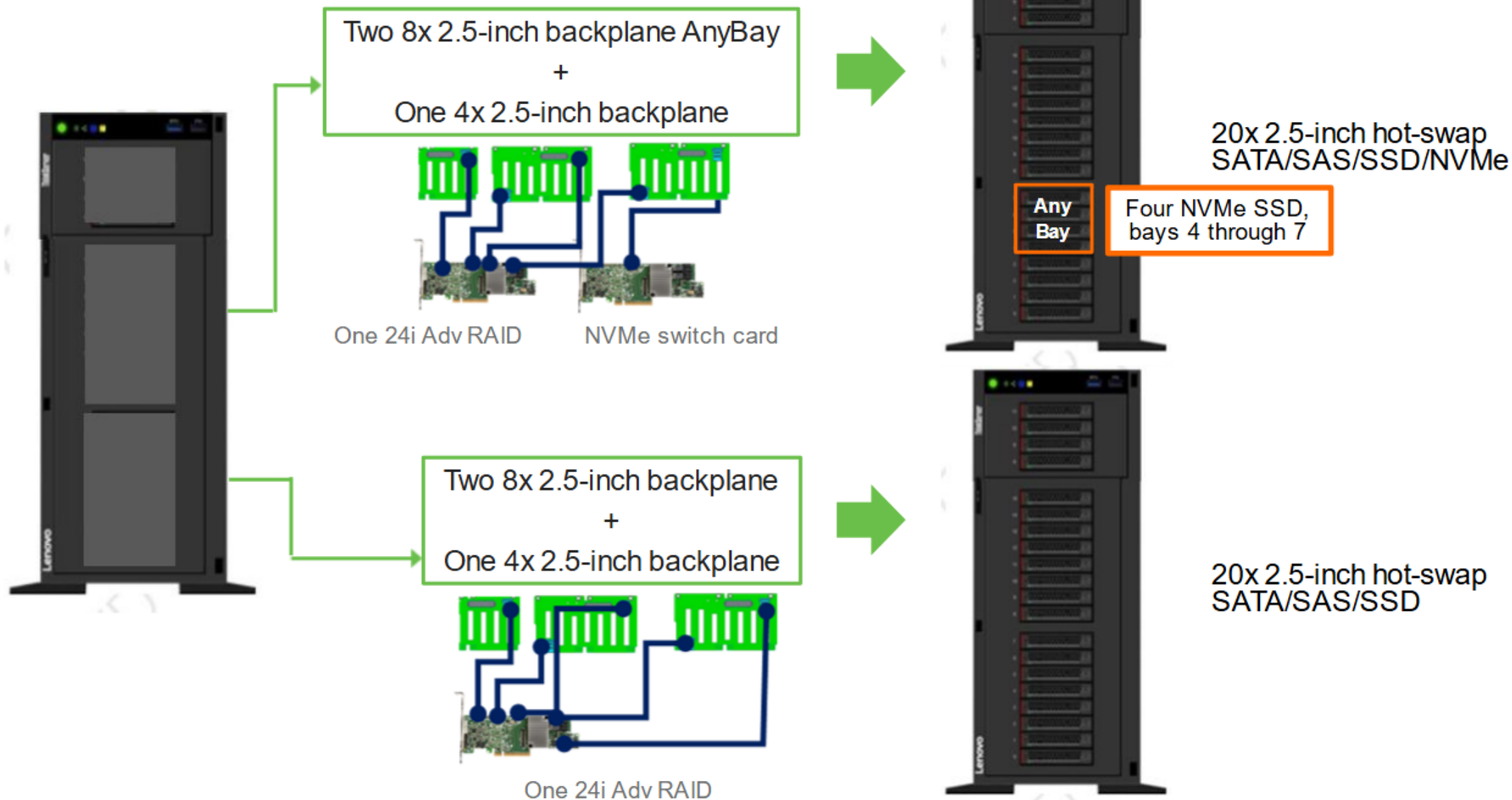
Eight 2.5-inch hot-swap

X



Twenty 2.5-inch hot-swap

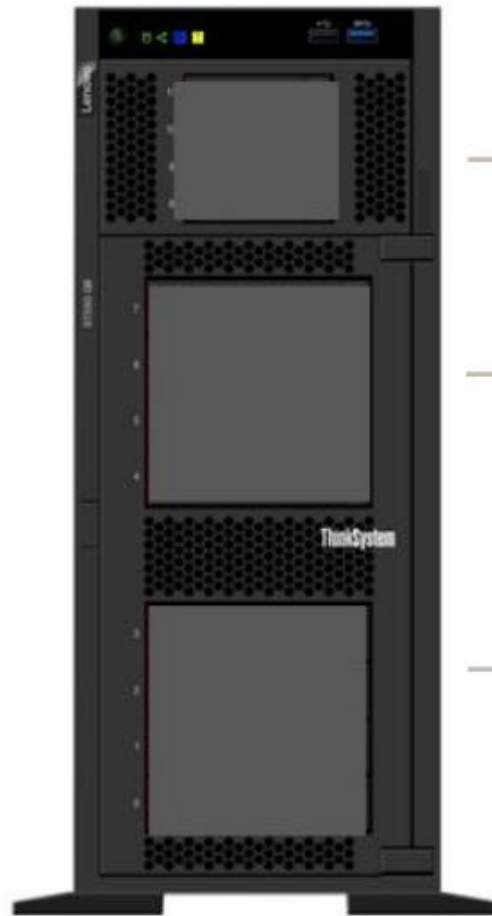
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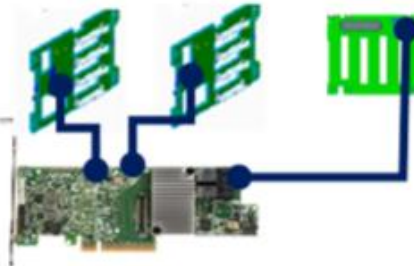
HDD configuration	HDD Type							PCIe NVMe Switch Card	SATA/SAS RAID solution								ODD	SATA M.2
	3.5-inch		2.5-inch								Entry RAID Cacheless	Full Feature Cached RAID			JBOD HBA			
	SATA	SAS	NVMe	SATA SSD	SAS SSD	SAS HDD	SATA HDD		Non RAID	SW SATA RAID	8i Entry	8i Adv	16i Adv	24i Adv	8i JBOD HBA	16i JBOD HBA		
										Intel RSTe	530-8i	730-8i 930-8i	930-16i	930-24i	430-8i	430-16i		
Hybrid eight 3.5-inch + four 2.5-inch hot-swap SAS/SATA	x	x		x	x	x	x						x				No	x
	x	x		x	x	x	x									x	No	x
	x	x		x	x	x	x				x				x		No	x
	x	x		x	x	x	x					x			x		No	x
	x	x		x	x	x	x				x	x					No	x
	x	x		x	x	x	x					(2)					No	x

Hybrid eight 3.5-inch and four 2.5-inch hot-swap

X



Two 4x 3.5-inch backplane
+
One 4x 2.5-inch backplane



- One 16i Adv RAID or HBA, or
- Two or 1 + 1 8i RAID or HBA



Eight 3.5-inch + four
2.5-inch hot-swap
SATA/SAS/SSD

HDD filler population rules

Drive bays with AnyBay backplane will only have a single 2.5-inch filler. For other filler population rules, refer to the chart.

2.5 filler type



Single 2.5 filler



HDD assembly
No HDD with single filler
No HDD with 4*1 2.5 filler

	BP1 Location (BP assembly)	BP2 Location (BP assembly)	BP3 Location (BP assembly)
Conf1 0HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf2 1HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf3 2HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf4 3HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf5 4HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf6 5HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf7 6HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf8 7HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf9 8HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf10 9HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf11 10HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf12 11HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf13 12HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf14 13HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf15 14HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf16 15HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf17 16HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf18 17HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf19 18HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf20 19HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19
Conf21 20HDD	0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15	16 17 18 19

HDD population rules

ST550 HDD population rules are listed here:

- Mix HDD vendor is supported with Lenovo qualified drives.
- Mix HDD capacity is supported with Lenovo qualified drives.
 - Mixed HDD capacity in one system, but not in one RAID Array.
 - Install lower capacity HDD first.
- Mix 2.5-inch HDD and 3.5-inch HDD into 3.5-inch HDD tray is supported with Lenovo qualified drives.
 - Mix 2.5-inch and 3.5-inch HDD in one system, but not in one RAID Array.
 - Support mix 2.5-inch of SSD/SAS/SATA into 3.5-inch HDD tray.
 - Install 2.5-inch HDD first.
 - Install lower capacity HDD first.
 - HDD type priority: NVMe SSD > SAS SSD > SATA SSD > SAS HDD > SATA HDD.
- Mix SSD/SAS/SATA HDD into 2.5-inch HDD tray is supported with Lenovo qualified drives
 - Mix SSD/SAS/SATA into 2.5-inch HDD tray in one system, but not in one RAID Array.
 - Install lower capacity HDD first.
 - HDD type priority: NVMe SSD > SAS SSD > SATA SSD > SAS HDD > SATA HDD.

